

AMENDMENTS TO THE DRAWINGS

The attached sheet of drawings includes changes to Fig. 2. This sheet replaces the current sheet including Fig. 2. Fig. 2 has been amended to conform more clearly to its corresponding detailed description. Included are both an attached replacement sheet and an annotated sheet showing changes

Attachments: Replacement Sheet and Annotated Sheet

REMARKS

Claims 1-5 are pending in the application.

Claims 1-5 stand rejected.

Drawings

The drawings are objected to for failing to have support from the descriptive portion of the specification. Applicants have amended Fig. 2 to address the Examiner's concerns. No new matter is added thereby.

Specification

The specification amendments filed March 4, 2005, are objected to under 35 U.S.C. 132(a) because the amendments are said to introduce new matter into the disclosure. Applicants respectfully traverse this objection.

The amendment proposed in the amendment filed March 4, 2005, at P. 6, line 7, finds support, and indeed is identical to the sentence in the original Summary of the Invention, at p. 2, lines 26-27, as originally filed by Applicants. Applicants, respectfully, do not believe that a more clear basis for support of an amendment could exist, as this amendment is simply the reiteration of a definition already existing in the originally-filed specification. To that end, Applicants respectfully direct the Examiner's attention to the original Summary of the Invention, at p. 2, lines 26-27, where the aforementioned definition can be found.

As noted earlier in the prosecution of the present application, 37 CFR 1.77(b) clearly states: "The specification should include the following sections in order: (1) Title of the

invention...(2) Cross-reference to related applications... (3) Statement regarding federally sponsored research or development. (4) Reference to a 'Sequence Listing,'... (5) Background of the invention. (6) Brief summary of the invention. (7) Brief description of the several views of the drawing. (8) Detailed description of the invention. (9) A claim or claims. (10) Abstract of the disclosure.” Thus, Applicants may rely on other portions of the specification to demonstrate that the amendment in question finds support in the “specification.”

Rejection of Claims under 35 U.S.C. §112

Claims 1-5 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement.

The Office Action cites paragraph 4 of the final Office Action (dated 9/29/04), which states, in pertinent part, that “amended claims 1-5 do not have support in the descriptive portion of the specification, e.g. pages 5-7, that support the claim language. Also, the claim language is not supported in juxtaposition to the drawing figures presented.”

MPEP 706.03(c) states that an Office Action that based on the 35 U.S.C. §112 description requirement should “identify (by suitable reference to page and line numbers and/or drawing figures) the subject matter not properly described in the application as filed, and provide an explanation of your position.” Applicants respectfully submit that, once again, the final Office Action (and so present Office Action) does not identify any particular subject matter claimed in claims 1-5 that does not have support in the descriptive portion of the specification. The final Office Action (and so present Office Action) makes the broad statement that “amended claims 1-5 do not have support in the descriptive portion of the specification, e.g., pages 5-7, that support the claim language.”

Applicants are unaware of any requirement that would limit the written description of the invention to pages 5-7 of the disclosure. Applicants again note 37 CFR 1.77(b) for the proposition that the specification includes the sections listed previously herein. Thus, Applicants are free to rely on any portion of the specification to demonstrate support for language used in the claims, and so that the claims are in compliance with 35 U.S.C. §112.

Applicants respectfully submit that every feature of the claimed invention finds support in the specification. The features of the claim 1 find support in the specification in at least the following locations: Estimating an expected component surplus: see page 4, lines 22-24; Identifying a plurality of components required to produce a product: see page 5, line 3; Defining a vector of connect rates for the components: see page 6, lines 1-10; Defining an uncancelable level for each of the components: see pages 4 and 5; Assuming that a selected one of the components is available at least at an uncancelable level of the uncancelable levels corresponding to the selected one of the components: see page 2 line 22 to page 3 line 7; Computing the expected component surplus for the selected component using a mean production for the product, the uncancelable level and the vector connect rates: See page 6, lines 1-10.

The features of the claim 2 find support in the specification on page 2, lines 21-28. The features of the claim 3 find support in the specification on page 2, lines 22 to page 3, line 10. The features of claim 4 find support in the specification on page on page 2, line 22 to page 3, line 10. The features of claim 5 find support in the specification on page 6, lines 1-10.

With regard to the claim language not being supported “in juxtaposition to the drawing figures presented,” Applicants refer to the discussion of the drawings in the response to final Office Action filed 12/29/04, which demonstrates that the claim language is supported by the drawings and is in agreement with the specification.

Accordingly, Applicants respectfully request withdrawal of the rejection based on 35 U.S.C. §112.

Rejection of Claims under 35 U.S.C. §103

Claims 1-5 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Willis, et al., U.S. Patent No. 5,515,269 (Willis).

While not conceding that the cited reference qualifies as prior art, but instead to expedite prosecution, Applicants have chosen to respectfully disagree and traverse the rejection as follows. Applicants reserve the right, for example, in a continuing application, to establish that the cited reference, or other references cited now or hereafter, do not qualify as prior art as to an invention embodiment previously, currently, or subsequently claimed.

Applicants respectfully submit that the claimed invention is directed to a system and method for the estimation of erosion costs in assemble-to-order manufacturing operations. For example, claim 1 presently recites:

1. A computer implemented method:
estimating an expected component surplus by
 - identifying a plurality of components required to produce a product;
 - defining a vector of connect rates for the components;
 - defining an uncancelable level for each of the components, each of the
 - uncancelable levels defining a quantity of the each of the components
 - below which the quantity of the each of the components cannot be
 - liquidated without incurring a charge;
 - assuming that a selected one of the components is available at least at an
 - uncancelable level of the uncancelable levels corresponding to the selected
 - one of the components; and

computing the expected component surplus for the selected component using a mean production for the product, the uncancelable level and the vector of connect rates, wherein the computing is performed by a computer.

As an initial matter, the Office Action recites that certain claim elements, which read:

“...
estimating an expected component surplus by
identifying a plurality of components required to produce a product;
defining a vector of connect rates for the components;
...
assuming that a selected one of the components is available at least at an uncancelable level of the uncancelable levels corresponding to the selected one of the components; and
computing the expected component surplus for the selected component using a mean production for the product, the uncancelable level and the vector of connect rates, wherein the computing is performed by a computer.
....”

are taught by Willis (Office Action, para. 7) Applicants stridently, if respectfully, protest this reading of the claim language.

First, the Office Action appears to equate the recited “estimating an expected component surplus” with Willis’ performing component selection. Such a parallel cannot successfully be drawn. The claimed estimating an expected component surplus results in an expected component surplus for a selected component. First, the result is only an expected value for the

component surplus. Second, the computation of the expected value for the component surplus uses a mean production for the product, an uncancelable level and a vector of connect rates, none of which are taught by Willis. The fact that Willis fails to teach such parameters comes as no surprise, because Willis is not concerned with estimating an expected component surplus, but is instead directed to a method utilizing component-to-attribute relationships resulting in a bill of materials documenting the specific structure of the configuration of an end product. (Abstract) Willis is simply concerned with creating a bill of materials to document the specific structure of the end product together with price/cost of the end product. Willis does so by providing a method that utilizes component-to-attribute relationships which results in a bill of materials that documents the specific structure of the configuration of an end product. Attributes and their values together with option attributes which describe the end product are input to a database. A check is made to determine if dependent attributes are required to further define the end product. A check is then made to determine if incompatible attribute combinations exist. Components are selected to satisfy the specific structure of the configuration of the end product. Part numbers and nomenclature are created to identify the configuration just created.

Second, this rejection also fails to demonstrate any teaching of Willis that presents an element that corresponds to the claim limitation of defining a vector of connect rates for the components, nor one that presents an element that corresponds to the claim limitation of assuming that a selected one of the components is available at least at an uncancelable level of the uncancelable levels corresponding to the selected one of the components. These limitations are not even discussed in the Office Action. In fact, no such defining or assuming is shown, taught or suggested by Willis. As noted by the predecessor of the United States Court of Appeals for the Federal Circuit, the United States Court of Customs and Patent Appeals, "All

words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 165 USPQ 494, 496 (C.C.P.A. 1970).

As is clear from Fig. 5 of Willis (and the presentation of Fig. 5 on the face of Willis), as well as the remainder of Willis disclosure, the only information generated by the method of Willis is the verification of attributes, component selection and the generation of a bill of materials. No estimation of any value whatsoever is shown, taught or suggested by the disclosure of Willis, cited or otherwise. Moreover, Applicants are unable to identify anywhere in Willis the tracking of inventories, as is contemplated by the claimed invention’s use of uncancelable levels.

To this end, the Office Action, though failing to appreciate that Willis’ never reaches the subject of inventory levels, does correctly recognize that Willis fails to teach the claimed uncancelable level for each of the components, and so the claimed limitations of:

“ ...

estimating an expected component surplus by

...

defining an uncancelable level for each of the components, each of the uncancelable levels defining a quantity of the each of the components below which the quantity of the each of the components cannot be liquidated without incurring a charge;

assuming that a selected one of the components is available at least at an uncancelable level of the uncancelable levels corresponding to the selected one of the components; and

computing the expected component surplus for the selected component *using* a mean production for the product, *the uncancelable level* and the vector of connect rates,” (emphasis supplied)

However, the Office Action posits that the limitations presented above would be obvious to one of skill in the art at the time of invention. The Office Action states that one of ordinary skill in the art would have arrived at the claim limitations presented above by the following line of reasoning:

“However, levels that are not to have been cancelled have been common knowledge in the art. To have provided such for Willis would have been obvious to one of skill in the art. The motivation for providing such would have been using a known factor in determining a cost/price determination when identifying components used in common knowledge product production.” (Office Action, para. 7)

First, the above passage fails to appreciate the claim language by defining an uncancelable level as a “[level] that [is] not to have been cancelled” As noted earlier herein, in earlier responses and in the Specification, as filed:

“The uncancelable level for a component is the quantity of the component that cannot be liquidated without charge.” (Specification, p. 2, lines 26-27)

This characterization is not only incorrect, it colors the remainder of the rejection. Given that, in fact, an uncancelable level is not a “[level] that [is] not to have been cancelled ...,” but a “level for a component is the quantity of the component that cannot be liquidated without

charge,” the argument that the “motivation for providing such would have been using a known factor in determining a cost/price determination when identifying components used in common knowledge product production” is therefore defective on its face. No motivation could exist in the skill in the art, nor in Willis, to employ a factor that was unknown at the time of invention.

Reference may again be taken to the teachings of the United States Court of Customs and Patent Appeals, which has stated that mere speculation or unfounded assumption is not sufficient to support a *prima facie* case of obviousness. *See In re Warner*, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967); *In re Sporck*, 301 F.2d 686, 690, 133 USPQ 360, 364 (CCPA 1962). The Board of Patent Appeals and Interferences has also spoken on the matter:

“To support the conclusion that the claimed combination is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed combination or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references... [S]implicity and hindsight are not the proper criteria for resolving the issue of obviousness.” *Ex Parte Clapp*, 227 U.S.P.Q. 972, 973 (Bd. Pat. App. & Int’f 1985).

Further, this portion of the rejection takes a substantial portion of the claim’s recited limitations, and simply subsumes them by assumption. Even if the defective definition of uncanceled level is assumed to be correct *arguendo* (which Applicants maintain is inapposite), Applicants respectfully submit that a cognitive leap that comprehends these limitations is unlikely, at best, and finds no basis for such in either Willis or the ordinary skill in the art at the time of invention, nor in their permissible combination.

Because Willis and the posited skill in the art at the time of invention suffer from such infirmities, Applicants are left to surmise that the Office Action reaches its conclusions based on the use of the Applicants' disclosure as a blueprint. Unfortunately, Applicants respectfully submit that such application amounts to the use of hindsight. As noted by Judge Lim in *In re Kotzab*, 217 F.3d 1365, 55 USPQ2d 1313 (Fed. Cir. 2000):

“A critical step in analyzing the patentability of claims pursuant to section 103(a) is casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. ... Close adherence to this methodology is especially important in cases where the very ease with which the invention can be understood may prompt one ‘to fall victim to the insidious effect of a hindsight syndrome wherein that which only the invention taught is used against its teacher.’” (*Id.* at 1369, 55 USPQ2d at 1316) (citations omitted)

Moreover,

“It is impermissible to use the claimed invention as an instruction manual or ‘template’ to piece together the teachings of the prior art so that the claimed invention is rendered obvious.” *In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1784 (Fed.Cir. 1992), citing *In re Gorman*, 933 F.2d 982, 987, 18 USPQ2d 1885, 1888 (Fed. Cir.1991).

In other words, “there still must be evidence that ‘a skilled artisan, . . . with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed.’” *Ecolochem Inc. v. Southern California Edison*, 227 F.3d 1361, 1375, 56 USPQ2d 1065, 1075-76 (Fed. Cir. 2000). The fact that the prior art could have been modified in a manner consistent with the recited claim limitations does not make those limitations obvious unless the desirability of such limitations are suggested by *Uchida*. *In re Gordon*, 733 F.2d 900, 902, 221USPQ 1125, 1127 (Fed. Cir. 1984).

The foregoing being the case, the Office Action would then appear to rely on the fact that such teachings are somehow inherent, either in Willis or the ordinary skill in the art, or possibly in their combination. However, the Board of Patent Appeals and Interferences has also spoken on this issue:

“In relying on a theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.” *Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original).

Applicants are at a loss to explain how Willis or the knowledge of one of skill in the art would even drive one of skill in the art to look for a means by which a cost/price determination of any sort might be made in conjunction with Willis, given that Willis fails to recognize both the need and the ability to make such determinations. The only operation Willis performs is the

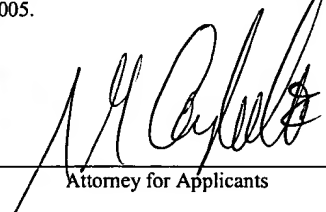
determination of "... prices (and costs, if desired) ..." of "... attributes and attribute values of the configured product" (Willis, col. 10, lines 7-19) This is merely the accounting for and recordation of such prices and costs. There is no cost/price determination, save for the identification of prices (and optionally, costs) of the given attributes and attribute values. Moreover, even if such a cause-and-effect relationship were considered by Willis, Applicants note that no such relationship exists in the language of claim 1.

In light of the foregoing arguments, Willis, even in light of skill in the art (which Applicant maintains is neither appropriate nor properly defined in the Office Action), fails to make obvious the claimed invention, as claimed in independent claim 1. Moreover, Applicant respectfully asserts that claims 2-5, which depend from independent claim 1, are also allowable, for at least the foregoing reasons.

CONCLUSION

In view of the amendments and remarks set forth herein, the application is believed to be in condition for allowance and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is invited to telephone the undersigned at 512-439-5084.

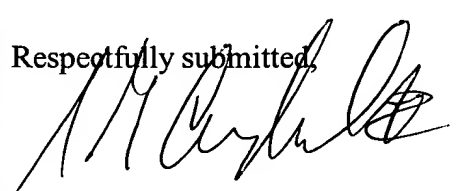
I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on September 26, 2005.



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Date of Signature

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Computation of Surplus Components (e.g.,
estimating an expected component surplus)

Fig. 2

